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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/576,881

04/21/2006

Masaya Yukinobu

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EXAMINER

CHU, CHRIS C

ART UNIT

PAPER NUMBER

2815

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DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/576,881	<b>Applicant(s)</b> YUKINOBU, MASAYA	
	<b>Examiner</b> CHRIS C. CHU	<b>Art Unit</b> 2815	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 - 5 and 7 - 17 is/are pending in the application.
- 4a) Of the above claim(s) 9 - 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 3 and 7 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 8, 16 and 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendment filed on December 23, 2008 has been received and entered in the case.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 – 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Su et al. (U. S. Pat. No. 6,621,215) in view of Seo (U. S. Pub. No. 2003/0,215,651), further in view of Bommarito et al. (U. S. Pat. No. 5,825,526).

Regarding claim 1, Su et al. discloses in e.g., Fig. 5A a transparent conductive multi-layer structure (the structure in e.g., Fig. 5A) which comprises

- a smooth base material (since the elements 44 and 45 in the removed area of Su et al. have a smooth surface, the elements 44 and 45 in the removed area read as the smooth base material; column 5, line 6, column 8, lines 38 – 39 and see e.g., Fig. 5A),
- a transparent conductive layer (54; column 7, lines 21 – 23) formed on the smooth base material (see e.g., Fig. 5A),

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- an auxiliary electrode layer (52; column 6, line 8) formed in a pattern on the transparent conductive layer (54; see e.g., Fig. 5A), and
- a transparent substrate (42; column 4, line 67) joined to the transparent conductive layer (54) and auxiliary electrode layer (52) through an adhesive layer (43; column 6, lines 16 – 24 and see e.g., Fig. 5A).

Furthermore, the limitations “by coating” and “peelable” are product-by-process limitation. Even though product-by-process claim is limited by and defined by the process, determination of patentability is based upon the product itself. The patentability of a product does not depend on its method of production. If the product in product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product is made by a different process. In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted). A “product by process” claim is directed to the product per se, no matter how actually made, In re Hirao, **190 USPQ 15 at 17** (footnote 3). See also In re Brown, **173 USPQ 685**; In re Luck, **177 USPQ 523**; In re Fessmann, **180 USPQ 324**; In re Avery, **186 USPQ 116**; In re Wertheim, **191 USPQ 90 (209 USPQ 254** does not deal with this issue); and In re Marosi et al., **218 USPQ 289** final product per se which must be determined in a “product by, all of” claim, and not the patentability of the process, and that an old or obvious product, whether claimed in “product by process” claims or not. Note that Applicant has the burden of proof in such cases, as the above caselaw makes clear. Even further, the limitation “the smooth base material being peelable from the transparent conductive layer” is functional limitation which does not differentiate the claimed structure over Su et al. because the smooth base materials 44 and 45 of Su et al. is conceivably able to peel or remove from the transparent conductive layer 54.

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Su et al. does not disclose average particle diameter being from 1 to 100 nm. Seo teaches in e.g., page 2, paragraph 0021, lines 1 – 9 a transparent conductive layer (the conductive layer) comprising conductive fine oxide particles of from 1 to 100 nm in average particle diameter and a binder component (page 2, paragraph 0021, lines 7 – 9). It would have been obvious to one of ordinary skill in the art at the time when the invention was made to apply the average particle diameter of Seo as the specific diameter to form the oxide particles of Su et al. as taught by Seo to prevent oxidation of the metal oxide in the conductive layer and enhance the reducibility of the metal oxide (page 2, paragraph 0028, lines 19 and 20).

Furthermore, Su et al. and Seo do not disclose the material of the smooth base material comprising plastics. Bommarito et al. teaches in e.g., column 3, lines 35 – 43 a material of a sacrificial or removing layers (the flexible, plastic films 16; column 3, lines 40 and 41) comprising plastics (column 3, lines 40 and 41). It would have been obvious to one of ordinary skill in the art at the time when the invention was made to further apply the plastic films of Bommarito et al. as the specific materials to form the smooth base material of Su et al. and Seo as taught by Bommarito et al. to provide a flexibility (column 3, lines 40 – 43).

Regarding claim 2, Su et al., as modified, discloses in e.g., Fig. 3A and Fig. 5A said auxiliary electrode layer (52) having a pattern in the shape of a lattice, the shape of a mesh, the shape of a honeycomb, the shape of parallel lines (the shape of the elements 52 under the elements 46 in e.g., Fig. 3A) or the shape of the teeth of a comb.

Regarding claim 3, Su et al., as modified, discloses in e.g., Fig. 5A said auxiliary electrode layer (52) comprising at least one selected from fine metal particles (column 7, lines 50 – 58), fine carbon particles and fine ruthenium oxide particles, or at least one selected from fine

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metal particles, fine carbon particles and fine ruthenium oxide particles and a binder component.

Regarding claim 7, Su et al., as modified, discloses in e.g., Fig. 5A said transparent conductive layer (54) having been subjected to rolling to make the conductive fine oxide particles dense (column 7, lines 21 – 23). Furthermore, the limitation “subjected to rolling to make the conductive fine oxide particles dense” is intended use language which does not differentiate the claimed structure over Su et al. because the transparent conductive layer of Su et al. is capable to roll the transparent conductive layer to make the conductive fine oxide particles dense even if it is not optimized for this purpose.

#### ***Allowable Subject Matter***

4. Claims 4, 5, 8, 16 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

(A) Claim 4 contains allowable subject matter because none of references of record teach or suggest, either singularly or in combination, at least the limitation of a first auxiliary electrode layer comprising at least one selected from fine carbon particles, fine ruthenium particles and fine ruthenium oxide particles and a binder component, and a second auxiliary electrode layer comprising fine metal particles and a binder component.

(B) Claim 5 contains allowable subject matter because none of references of record teach or suggest, either singularly or in combination, at least the limitation of a transparent coat layer formed by coating between i) said auxiliary electrode layer and said transparent conductive layer and ii) said adhesive layer.

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(C) Claim 8 contains allowable subject matter because none of references of record teach or suggest, either singularly or in combination, at least the limitation of an adhesive layer being mixed with at least one additive selected from an ultraviolet absorber, a dehydrating agent and a deoxidizer.

(D) Claim 16 contains allowable subject matter because none of references of record teach or suggest, either singularly or in combination, at least the limitation of a smooth base material having been peeled off to have a transparent conductive layer and an auxiliary electrode layer which are joined to a transparent substrate through an adhesive layer.

(E) Since claim 17 is a dependent claim of objected claim (claim 16), this claim is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims (e.g., claim 16).

### ***Response to Arguments***

5. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRIS C. CHU whose telephone number is (571)272-1724. The examiner can normally be reached on 11:30 - 8:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Parker can be reached on 571-272-2298. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated



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information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Primary Examiner  
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Thursday, March 19, 2009